

US EPA ARCHIVE DOCUMENT

February 2018  
**FACT SHEET**  
**Authorization to Discharge under the**  
**National Pollutant Discharge Elimination System**  
**for the**  
**White Mountain Apache Tribe – Canyon Day Sand & Gravel Wash Process Plant**  
**NPDES Permit No. AZ0024511**

Applicant address: White Mountain Apache Tribe  
Department of Public Works  
P.O. Box 1038  
Whiteriver, AZ 85941

Applicant Contact: Alfred R. Brooks, Facility Manager  
(928) 338-1505

Facility Address: Canyon Day Sand & Gravel Wash Process Plant  
9802 Farm Road  
Whiteriver, AZ 85941

## **I. STATUS OF PERMIT**

Pursuant to the U.S. Environmental Protection Agency (“EPA”) regulations set forth in Title 40, Code of Federal Regulations (“CFR”) Part 122.21, White Mountain Apache Tribe (“WMAT”) was issued a National Pollutant Discharge Elimination System (“NPDES”) Permit (No. AZ0024511) on September 17, 2010, for its Public Works Department sand and gravel wash process facility located in Gila County, Arizona. The permit was effective October 1, 2010, through midnight, September 30, 2015. WMAT submitted a renewal application on June 30, 2015 and updated information on January 25, 2018. This fact sheet is based on information provided by the discharger through its application and discharge data submittal, along with the appropriate laws and regulations.

Pursuant to Section 402 of the Clean Water Act (“CWA”), the EPA is proposing issuance of the NPDES permit renewal to WMAT for the discharge of treated effluent to White River, a water of the United States.

## **II. SIGNIFICANT CHANGES TO PREVIOUS PERMIT**

1. The proposed permit includes a new requirement for submitting DMRs electronically through EPA’s NetDMR system.
2. The one-time requirement for a priority pollutant scan has been removed.
3. Due to infrequent or no effluent discharge, the requirement for receiving water monitoring (upstream and downstream of the outfall) has been removed.

### **III. GENERAL DESCRIPTION OF FACILITY**

WMAT's Department of Public Works operates a sand and gravel wash process facility to provide materials for use in construction and fill. Materials crushed and washed at the plant are mined on the Tribe's land then transported to the plant for processing. The facility is located on Farm Road, approximately one mile southwest of the community of Canyon Day in Gila County, Arizona. Approximately 500 tons of sand and gravel are crushed and washed annually at the plant. Wash water is pumped from the White River then mixed with the crushed material to help separate grades of sand and gravel. Process generated wastewater flows to a sediment trap then to a settling pond where remaining solids collect before the water is discharged through a simple corrugated pipe to a spillway which serves as the outfall to White River.

The facility was inspected by EPA on September 23, 2015 and found to be in good working order. The process design flow rate is 50,000 gallons per day and based on the 2018 updated application, the facility has reported "No discharge" in discharge monitoring reports from 2013-2017. Sand washing process was only run sporadically during some months for 8 hours per month up to 42 hours per month.

### **IV. DESCRIPTION OF RECEIVING WATER**

The discharge of treated wastewater is to perennial White River, a water of the United States.

### **V. EFFLUENT CHARACTERISTICS**

#### **A. Process Description**

After leaving the flow equalization pond for the sand washer, process water is treated to remove silt and suspended solids released by the washer. Treatment is achieved through a sediment trap and then by a pond which serves as a longer-detention gravitational settling basin. The size of the settling pond is approximately 650 by 235 feet, with a depth that varies significantly as sediments accumulate and are subsequently removed during regular maintenance periods. After settling, water overflows through a corrugated pipe to a rock-bottomed spillway that discharges to the adjacent White River.

#### **B. Discharge Monitoring Report (DMR) and Permit Compliance History**

Review of Discharge Monitoring Reports ("DMRs" from January 2013 through December 2017 showed the sand wash process plant was not being utilized in many months. When in use, the operation usually took place one or 2 days (8-16 hours) up to a week (42 hours) per month with no discharge occurring. Last plant operation took place in May 2016. The DMRs showed zero discharge during the reported period.

### **VI. BASIS OF PROPOSED PERMIT REQUIREMENTS**

EPA has developed effluent limitations and monitoring requirements in the permit based on an evaluation of the technology used to treat the pollutant (e.g., "technology-based effluent

limits”) and the water quality standards applicable to the receiving water (e.g., “water quality-based effluent limits”). EPA approved the tribal water quality standards (“WQS”) on September 27, 2001, set forth in the White Mountain Apache Tribe’s Water Quality Protection Ordinance. As required by the CWA, the Tribe initiated a tri-annual review of its WQS in 2005, with the most recent revisions on May 18, 2015. EPA has established the most stringent of applicable technology-based or water quality-based standards in the proposed permit, as described below.

**A. Technology-based Effluent Limitations Guidelines (“ELGs”)**

EPA has established national standards based on the performance of treatment and control technologies for wastewater discharges to surface waters for certain industrial categories. Effluent limitations guidelines represent the greatest pollutant reductions that are economically achievable for an industry, and are based on Best Practicable Control Technology (“BPT”), Best Conventional Pollutant Control Technology (“BCT”), and Best Available Technology Economically Achievable (“BAT”). [Sections 304(b)(1), 304(b)(4), and 304(b)(2) of the CWA respectively]

The Canyon Day Sand and Gravel Wash Process Plant, as its name suggests, processes sand and gravel for the Tribe’s use in construction, fill, cement making, and other uses. In accordance with the applicable ELGs, technology-based effluent limitations are proposed for the following pollutants based on nationally promulgated effluent limitation guidelines for “Construction Sand and Gravel” (40 CFR 436.30). Additionally, to support the limits on turbidity set by the Tribe for the designated uses of the receiving water, based on best professional judgment EPA will apply the suspended solids effluent limit from the similar “Industrial Sand” ELG [40 CFR 436.42(a)(1)]. These effluent ELGs represent the degree of effluent reduction attainable by the application of the BPT and BCT. Consistent with the previous permit, these requirements are described below.

Concentration Based Effluent Limits		
	30-day Average	Daily Maximum
TSS	25 mg/l	45 mg/l
pH	Between 6.5 and 9.0 at all times	Between 6.5 and 9.0 at all times
Flow	13,000 gallons per day, facility average flow (used to calculate mass loading)	50,000 gallons per day, facility maximum flow (used to calculate mass loading)
Mass Based Effluent Limits (based on 13,000 GPD average flow and 50,000 GPD peak flow)		
TSS	1.2 kg/day	8.5 kg/day

**B. Water Quality-Based Effluent Limitations (“WQBELs”) and BPJ**

Water quality-based effluent limitations, or WQBELs, are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard. [40 CFR 122.44(d)(1)]

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water. [40 CFR 122.44 (d) (1) (ii)]

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the U.S. EPA NPDES Permit Writers Manual (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses and impairments of receiving water
2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential analysis

**1. Applicable standards, designated uses and impairments of receiving water**

The designated uses of the receiving waters as defined by the WMAT water quality standards for White River are warmwater habitat, irrigation, domestic/industrial water supply, groundwater recharge, livestock & wildlife, primary contact, ceremonial primary contact, gathering of plants, and cultural significance.

**2. Dilution in the receiving water**

Discharge from Outfall 001 is to White River, and the Tribe has not authorized a mixing zone for this discharge. Furthermore, the Tribe's ordinance prohibits mixing zones in areas with a designated use of primary contact, as in the case of White River. Therefore, no dilution of the effluent has been considered in the development of water quality based effluent limits applicable to the discharge.

**3. Type of industry**

Typical pollutants of concern for discharges from a sand and gravel wash operation include Total Suspended Solids (TSS) and altered pH, and are addressed through the ELGs as described in Section VI.A above.

**4. History of compliance problems and toxic impacts**

Review of the DMRs from January 1, 2013 to December 31, 2017 shows that the facility has not discharged during this reported period.

**5. Existing Data on Toxic Pollutants**

No existing data is available on toxic pollutants.

### **C. Rationale for Numeric Effluent Limits and Monitoring**

EPA evaluated the typical pollutants expected to be present in the discharge effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentration that have the reasonable potential to cause or contribute to water quality violations, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations as necessary.

#### *Flow*

Consistent with the previous permit, the nominal design flow of the facility is established as permit limits for monthly average flow and daily maximum flow, respectively.

#### *TSS*

The concentration limits TSS are established for the industrial categories of “Construction Sand and Gravel” and “Industrial Sand” and are incorporated into the permit. Under 40 CFR Section 122.45(f), mass limits are also required for TSS. Based on the design flow, the mass-based limit is included in the proposed permit, consistent with the previous permit.

#### *pH*

To ensure adherence to the minimum and maximum pH levels designated by the Tribe for the receiving water, monthly pH monitoring is required in the permit. This requirement is consistent with the previous permit.

#### *Temperature*

To ensure adherence to the minimum and maximum temperature established for the designated use of warmwater habitat, monthly temperature monitoring is required in the permit. This requirement is consistent with the previous permit.

#### *Turbidity*

In order to implement the Tribal standard for primary contact use in the receiving water, a turbidity standard with monthly monitoring is required in the permit. This requirement is consistent with the previous permit.

### **D. Anti-Backsliding**

Section 402(o) of the CWA prohibits the renewal or reissuance of an NPDES permit that contains effluent limits less stringent than those established in the previous permit, except as provided in the statute.

### **E. Antidegradation Policy**

EPA's antidegradation policy at 40 CFR 131.12 and the WMAT water quality standards require that existing water uses and the level of water quality necessary to protect the existing uses be maintained.



As described in this document, the permit establishes effluent limits and monitoring requirements to ensure that all applicable water quality standards are met. The permit does not include a mixing zone; therefore, these limits will apply at the end of pipe without consideration of dilution in the receiving water.

Furthermore, due to the low levels of toxic pollutants present in the effluent, high level of treatment being obtained, and water quality-based effluent limitations, the discharge is not expected to adversely affect receiving water bodies or result in any degradation of water quality.

## **VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS**

Section 3.5 of the WMAT's Ordinance and 2015 revision contains narrative water quality standards applicable to the receiving water. Therefore, the permit incorporates applicable narrative water quality standards.

## **VIII. MONITORING AND REPORTING REQUIREMENTS**

The permit requires the permittee to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the minimum frequency specified. Additionally, where effluent concentrations of toxic parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

The permittee shall conduct effluent monitoring to evaluate compliance with the proposed permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the proposed permit. All monitoring data shall be reported on monthly DMRs and submitted quarterly as specified in the proposed permit. All DMRs are to be submitted electronically to EPA using NetDMR.

## **IX. SPECIAL CONDITIONS**

### **A. Best Management Practices**

Consistent with the previous permit, the proposed permit requires that the permittee establish (or update) and implement the BMPs designed to prevent pollutants from entering White River and other surface waters while performing normal processing operations at the facility. In addition, the permit requires an operator's manual be prepared and made available for staff use at the facility.

### **B. Asset Management**

40 CFR 122.41(e) requires permittees to properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Asset management planning provides a framework for setting and operating quality assurance procedures and ensuring the permittee has

sufficient financial and technical resources to continually maintain a targeted level of service. Asset management requirements have been established in the permit to ensure compliance with the provisions of 40 CFR 122.41(e).

## **X. OTHER CONSIDERATIONS UNDER FEDERAL LAW**

### **A. Impact to Threatened and Endangered Species**

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat. Since the issuance of NPDES permits by U.S. EPA is a Federal action, consideration of a permitted discharge and its effect on any listed species is appropriate.

To determine whether the discharge would affect any endangered species or habitat, EPA reviewed a list of threatened and endangered species associated with aquatic habitats in the White Mountain Apache Reservation. The U.S. Fish and Wildlife Service of Arizona Fishery Resource Office in Pinetop, Arizona concurs with the WMAT's list of threatened and endangered species. A review of the FWS database for Apache County Species yields a broad list of species of concern as follows:

Names (common and scientific)	Status
Apache (Arizona) trout ( <i>Oncorhynchus gilae apache</i> )	Threatened
Chiricahua leopard frog ( <i>Lithobates [Rana] chiricahuensis</i> )	Threatened
Mexican spotted owl ( <i>Strix occidentalis lucida</i> )	Threatened
Bald eagle ( <i>Haliaeetus leucocephalus</i> ),	Threatened
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Endangered
Loach Minnow ( <i>Tiaroga cobitis</i> )	Endangered

The major reason for decline of the Bald eagle is the effect of DDT on the reproductive cycle. The major reason for decline in the remaining species of concern is habitat destruction.

#### EPA's Finding:

This NPDES permit authorizes the discharge of effluent from the Canyon Day Sand & Gravel Wash Plant into receiving water that could be a habitat for the aforementioned threatened and endangered species. However, the discharge is not known to contain toxics or bioaccumulative substances. Additionally, the proposed permit authorizes discharge of treated gravel wash water into White River in compliance with applicable federal requirements and tribal water quality standards. These WMAT standards applied in the permit are both as numeric and narrative limits. They are designed to protect aquatic species, including threatened and endangered species, and any discharge in compliance with these standards should not adversely impact any threatened and endangered species. Re-opener clauses have been included should new information become available to indicate that the requirements of the permit need to be changed.



In considering all the information available, EPA believes that the discharge released in compliance with this permit will have “no effect” on any listed threatened or endangered species or its critical habitat that may be present in the vicinity of the discharge. Therefore, no requirements specific to the protection of endangered species are proposed in the permit.

## **B. Consideration of Environmental Justice (EJ) Impact**

EPA has conducted a screening level evaluation of the potential impact of this sand and gravel process facility and other permitted facilities within the immediate area on local residents through use of EPA’s EJSCREEN tool. Specifically, EPA used EJSCREEN to identify facilities near this facility that could pose risk to local residents through discharge of environmental contaminants. EPA has also evaluated whether demographic characteristics of the population living in the vicinity of the facility indicate that the local population might be particularly susceptible to such environmental risks. The results show that, at the time of this analysis conducted on February 15, 2018, the area in which the facility is located was above the 86<sup>th</sup> percentile nationally for wastewater discharger indicator.

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
<b>EJ Indexes</b>			
EJ Index for Particulate Matter (PM 2.5)	85	68	85
EJ Index for Ozone	94	93	97
EJ Index for NATA* Diesel PM	64	49	69
EJ Index for NATA* Air Toxics Cancer Risk	80	71	85
EJ Index for NATA* Respiratory Hazard Index	75	59	77
EJ Index for Traffic Proximity and Volume	58	39	61
EJ Index for Lead Paint Indicator	88	72	83
EJ Index for Superfund Proximity	62	47	69
EJ Index for RMP Proximity	58	39	62
EJ Index for Hazardous Waste Proximity	67	47	69
EJ Index for Wastewater Discharge Indicator	82	80	86

The EJSCREEN analysis of demographic characteristics of the community living near the facility indicates the local population may be at relatively higher risk of being exposed to environmental contaminants than the national population.

EPA also considers the characteristics of the sand and gravel operation and discharges, and whether those discharges pose exposure risks that the NPDES permit needs to further address. EPA finds no evidence to indicate the facility discharge poses a significant risk to local residents. EPA concludes that the facility is unlikely to contribute to any EJ issues. Furthermore, EPA believes that by implementing and requiring compliance with the provisions of the Clean Water Act, which are designed to ensure full protection of human health, the permit is sufficient to ensure the effluent discharges do not cause or contribute to human health risk in the vicinity of the facility.

### **C. Impact to Coastal Zones**

The Coastal Zone Management Act (CZMA) requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Plan (CZMA Sections 307(c)(1) through (3)). Section 307(c) of the CZMA and implementing regulations at 40 CFR 930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the State (or Territory) or its designated agency concurs with the certification.

The proposed permit does not affect land or water use in the coastal zone.

### **D. Impact to Essential Fish Habitat**

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act (MSA) set forth a number of new mandates for the National Marine Fisheries Service, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies to make a determination on Federal actions that may adversely impact Essential Fish Habitat (EFH).

The proposed permit contains technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. The proposed permit does not allow direct discharge to areas of essential fish habitat. Therefore, EPA has determined that the proposed permit will not adversely affect essential fish habitat.

### **E. Impact to National Historic Properties**

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to activity authorized by this NPDES permit no new construction or disturbance of land is anticipated. Therefore, pursuant to the NHPA and 36 CFR §800.3(a)(1), U.S. EPA is making a determination that issuing this proposed NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require U.S. EPA to undertake additional consulting on this permit renewal.

## **XI. STANDARD CONDITIONS**

### **A. Reopener Provision**

At this time, there is no reasonable potential to establish any other water quality based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursion above a water quality criterion, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. In accordance with 40 CFR 122 and 124, this permit may be modified by EPA to include effluent limits,

monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

**B. Standard Provisions**

The permit requires the permittee to comply with EPA Region 9 “Standard Federal NPDES Permit Conditions”, included in the permit as Attachment A.

**XII. ADMINISTRATIVE INFORMATION**

**A. Public Notice (40 CFR 124.10)**

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application.

**B. Public Comment Period (40 CFR 124.10)**

Notice of the draft permit was placed on EPA Region 9 website at: <https://www.epa.gov/aboutepa/public-notice-meetings-and-events-pacific-southwest>, with a minimum of 30 days provided for interested parties to respond in writing to EPA. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the final permit issuance.

**C. Public Hearing (40 CFR 124.12(c))**

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if EPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

**D. Water Quality Certification Requirements (40 CFR 124.53 and 124.54)**

For States, Territories, or Tribes with EPA approved water quality standards, EPA is requesting certification from the affected State, Territory, or Tribe that the proposed permit will meet all applicable water quality standards. Certification under section 401 of the CWA shall be in writing and shall include the conditions necessary to assure compliance with referenced applicable provisions of sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Territory law.

**XIII. CONTACT INFORMATION**

Comments, submittals, and additional information relating to this proposal may be directed to:

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75 Hawthorne Street (WTR 2-3)  
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415-972-3511  
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#### **XIV. REFERENCES**

- EPA. 1991. *Technical Support Document for Water Quality-based Toxics Control*. Office of Water, EPA. EPA/505/2-90-001.
- EPA. 1996. *Regions IX & X Guidance for Implementing Whole Effluent Toxicity Testing Programs*, Interim Final, May 31, 1996.
- EPA. 2015. *National Recommended Water Quality Criteria*. Office of Water, EPA. Human Health Criteria Table. <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table>
- EPA. 2010. *U.S. EPA NPDES Permit Writers' Manual*. Office of Water, EPA. EPA-833-K-10-001.
- White Mountain Apache Tribe 2001. *Water Quality Protection Ordinance of the White Mountain Apache Tribe of the Fort Apache Indian Reservation*
- White Mountain Apache Tribe. *Environmental Code*, May 18, 2015